NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Earth Science - Standards Process Group

Adopting Standards that Work

Problem

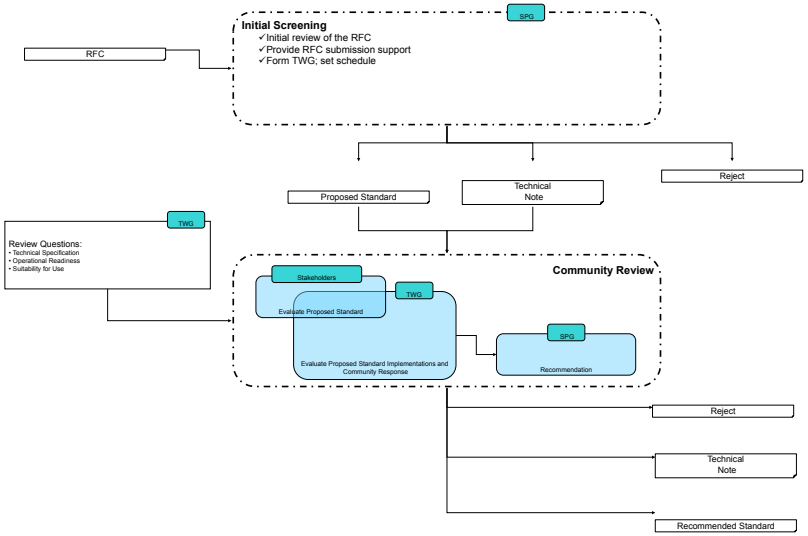
- Heterogeneous sensors, platforms sources, projects, campaigns
- Inconstant content, multiple formats, disparate projections, etc.
- Multiple models for search, discovery, packaging and delivery of data

Insights

- Interoperability does not require homogeneous systems, but rather coordination at the interfaces.
- Management can judge success based upon program goals rather than dictate solutions.
  - –example: degree of interoperability rather than use of particular data format.
- Communities of practice have solutions.
- Published practices that demonstrate benefit can grow …
  - – successful practice in specific community
  - – broader community adoption
  - – community-recognized “standards”

Kinds of Standards

- Science Content/ Units/ Encoding
- Metadata Content/ Encoding
- Interface Protocols (Catalog, Inventory, Data Access)



A Two Step Process for Adoption of Community-identified Standards

Benefits

- Registers community practice for NASA
  - –NASA Earth science data management can rely on standards to achieve highest priority interoperability
- Encourages consensus within communities
  - –Science investigators are assured that standards contribute to science success in their discipline.
- Grows use of common practices among related activities
  - –Discipline communities benefit from the expertise gained by others
- Documents data systems practices for use by external communities.
  - –Lowers barriers to entry and use of NASA data.

Community Leadership

- Strong proposals will have:
  - –Leadership to support and use standard
  - –Potential for impact
  - –Potential for approval
  - –Simple standard is better
  - –Potential for spillover to other communities
- Successful RFCs will have:
  - –At least two implementers
  - –Demonstrated operational benefit
  - –Leadership in generating the RFC
  - –Community willing/able to review

Results

- Decisions of the Standards Process Group are recommendations to NASA management. Management will accept and apply the recommendations depending on strength of demonstrated support and benefit.
- Future NASA data systems components will be judged partly on how well they interoperate using community-identified practices.
- Data systems implementers will depart from community practices when justified by greater benefit.

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http://www.esdswg.org/spg

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Chairs